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*Attorney*

June 2, 2003

Mary L. Cottrell, Secretary  
Department of Telecommunications and Energy  
One South Station  
Second Floor  
Boston, MA 02110

**Re: D.T.E. 01-68**

Dear Secretary Cottrell:

I am enclosing the June 2003 Quarterly Report in the above-captioned docket.  
Thank you very much for your time and attention to this matter.

Very truly yours,

Judy Y. Lee

cc: Service List

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Massachusetts Electric Company  
and  
Nantucket Electric Company

June 2003  
Quarterly Report

June 2, 2003

Submitted to:  
Massachusetts Department of  
Telecommunications and Energy  
D.T.E. 01-68

Submitted by:

Massachusetts Electric

A **National Grid** Company



Nantucket Electric

A **National Grid** Company



## **I. Introduction**

At the end of the summer of 2001, the Department asked all Massachusetts utilities, including Massachusetts Electric Company and Nantucket Electric Company (together, the “Company”) to undertake a critical self-assessment of their ability to provide reliable distribution service to their customers. On October 29, 2001, the Company filed a comprehensive ten volume response (“Reliability Report”), which gave detailed information about the various factors that contribute to the Company’s provision of reliable distribution service: growth forecasting; communication and notification procedures during outages; use of emergency generators and other equipment; personnel staffing and deployment during outages; weather forecasting; and maintenance and design of the distribution system. In the Reliability Report, the Company also analyzed its performance during the summer of 2001 and identified concrete steps that it was taking to improve future reliability. On March 22, 2002, the Department issued an order (“March 22<sup>nd</sup> Order”) on the Company’s Reliability Report, directing the Company to address several suggestions for improving each of the various factors, report on several follow-up items, and provide the Department with a report assessing its expected ability to respond adequately during the summer of 2002. The March 22<sup>nd</sup> Order also required the Company to make annual and quarterly reports for the next two years regarding certain reliability factors. On June 7, 2002, the Company filed its Compliance Filing and Report on Summer 2002 Readiness (“June 2002 Report”), and has since made filings each quarter, most recently in March of 2003 (“March 2003 Report”). This filing is the Company’s next compliance filing required by the Department’s order in this docket.

## **II. Discussion**

For each of the quarterly reports, the Department has requested information from the Company regarding the use of emergency generators and other equipment; personnel staffing and deployment, including employee hiring and training and emergency assistance resource sharing; and maintenance and design, including tree trimming and pole replacement activities. This report provides an update to the Department from the March 2003 Report.

### **A. Use of Emergency Generators and Other Equipment**

As described in earlier reports, the Company has contracted and established deployment procedures for three emergency generator units to be used during emergency conditions. Each individual emergency generator unit is a two-megawatt trailer-mounted, diesel engine. There was no new activity regarding these emergency generator units and their deployment during this period, other than the submission of air permit applications to the Massachusetts Department of Environmental Protection.

The Company has leased four additional two-megawatt trailer-mounted, diesel engine emergency generator units to be used during emergency conditions for the four-month period from June to September 2003. Thus, the Company now has a total of fourteen megawatts of portable emergency generation. The Company has designed a contingency plan to supplement its current interim back-up plan. This contingency plan provides for the expedited connection of the four additional emergency generator units to the Company's distribution system for the purpose of mitigating, if necessary, the impact of prolonged outages caused by failures to the existing power cables in the Cape Ann area.

## **B. Personnel Staffing and Deployment**

The Department has directed the Company to provide information on the progress of the hiring and training of 125 engineering and physical workers and the Company's emergency resource assistance sharing activities.

### **1. Employee Hiring and Training**

The June 2002 Report detailed the anticipated hiring and training of 125 engineering and physical workers in New England. The Company has now hired seventy-five physical workers in Massachusetts, which completes the final component of the Company's share of the 125 worker New England-wide hiring target described in the June 2002 Report,<sup>1</sup> and any subsequent open positions will be filled pursuant to the Company's agreement with the union.

The seventy-five physical workers are subdivided into the following job classifications: forty Overhead (OH) workers, twenty-four Underground (UG) workers, two Design (OTR) workers, and nine Substation (O&M) workers. All seventy-five physical workers are receiving extensive and ongoing training appropriate to their particular job classification.

### **2. Emergency Assistance Resource Sharing**

The Company's emergency assistance resource sharing policy remains as described in the Reliability Report. Since the filing of the March 2003 Report, sixty-six of the Company's line crews provided emergency assistance to the Company's New York affiliate Niagara Mohawk Power Corporation during the ice-storm of April 4<sup>th</sup>, 2003.

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<sup>1</sup> As described in previous reports, nineteen open positions in Massachusetts were supervisory, engineering, and technical support positions, and as detailed in the December 2002 report, all nineteen of these positions have been filled.

## **C. Maintenance and Design**

With regard to maintenance and design, the Department has asked for a report on tree trimming activities, including procedures, schedules, and a description of the cooperation by and coordination with communities. The Department has also requested quarterly information on pole replacement activities, including procedures for surveying poles and working with other utilities in this process, with particular attention paid to addressing the root cause of the excessive proliferation of doubled poles through improved coordination with owners and lessees of poles and the systematic removal of such doubled poles. The Company's tree trimming and pole replacement activities are described below.

### **1. Tree Trimming**

The Company's tree trimming procedures and circuit-based trimming program have changed effective April 1, 2003. The Company's tree trimming staff and process for coordinating with communities remain as described in the June 2002 Report.

The Company has changed its tree trimming reporting methods to allow reporting on a calendar year basis, which more closely tracks the Company's fiscal year (April 1<sup>st</sup> to March 31<sup>st</sup>). The revised reporting methodology will facilitate the generation and development of tree trimming reports for the Company as it provides these reports to the Department.

The Company exceeded its fiscal year 2003 goal of 2,024 miles trimmed by thirty-five miles, achieving a total of 2,059 miles trimmed. During the three-month period from October 1<sup>st</sup> to December 31<sup>st</sup>, 2002, the Company trimmed 383 miles. During the three-month period from January 1<sup>st</sup> through March 31<sup>st</sup>, 2003, the Company trimmed 828 miles, representing a 116% increase in miles trimmed over the previous period. During the month of April 2003, the

Company trimmed 212 miles. The following table shows the Company's tree trimming mileage attainments on a quarterly basis for the calendar year 2003:

<b>Massachusetts Electric Company (MECO) and Nantucket Electric Company (NECO) Vegetation Management Program</b>					
<b>MILES OF TRIMMABLE CIRCUITS MAINTAINED IN CALENDAR YEAR 2003 BY QUARTER</b>					
<b>GEOGRAPHIC AREA</b>	<b>1st QUARTER 01/01/03 TO 03/31/03</b>	<b>2nd QUARTER 04/01/03 TO 06/30/03</b>	<b>3rd QUARTER 07/01/03 TO 09/30/03</b>	<b>4th QUARTER 10/01/03 TO 12/31/03</b>	<b>TOTAL YEAR TO DATE</b>
	<b>ATTAINED</b>	<b>ATTAINED</b>	<b>ATTAINED</b>	<b>ATTAINED</b>	<b>ATTAINED</b>
NORTHSHORE	58.00				58.00
MERRIMACK VALLEY	136.00				136.00
<b>BAY STATE NORTH</b>	194.00	0.00	0.00	0.00	194.00
SOUTH SHORE	84.00				84.00
SOUTHEAST	219.00				219.00
<b>BAY STATE SOUTH</b>	303.00	0.00	0.00	0.00	303.00
CENTRAL	150.00				150.00
MONSON / SPENCER	81.00				81.00
WESTERN	100.00				100.00
<b>BAY STATE WEST</b>	331.00	0.00	0.00	0.00	331.00
<b>MECO/NECO TOTAL</b>	<b>828.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>828.00</b>

Effective April 1, 2003, the New England Distribution Vegetation Management Program, which is responsible for tree trimming activities for the Company, embarked on a five-year cycle circuit-based tree trimming program designed to prioritize tree trimming activities on a feeder reliability analysis basis (i.e., tree trimming will take place where the greatest gains in feeder reliability will be realized). In addition to the new tree trimming program, the Company's tree trimming budget for fiscal year 2004 was increased by \$2.95 million over the budget for fiscal year 2003. In order to implement the foregoing, the Company's specifications manual was updated to reflect the changes. The previous manual, dated April 9, 2002, has been replaced by the "National Grid – New England – Vegetation Management Distribution Line Maintenance T & M Program Manual" dated March 27, 2003, attached hereto as Exhibit A.

Finally, the Company will soon be soliciting competitive bids for twenty percent of the work needed to complete the feeder trimming for fiscal year 2004, and anticipates awarding contracts for this feeder trimming work in July.

## **2. Pole Replacement Activities**

As reported earlier, the Company has worked closely with other pole owners in Massachusetts, including Verizon, NStar, Western Massachusetts Electric Company, and Fitchburg Gas & Electric Company, to establish a common database for the purpose of tracking doubled pole locations and transfer status for each company attached to these poles, notifying these attaching companies of their obligations via email, and providing reporting and management tools. The Pole Lifecycle Management (“PLM”) System is in service, and the loading of data from distinct Company and Verizon databases, data scrubbing, and the elimination of duplicate pole records in PLM has been completed. PLM is now being used to track new doubled poles as they are set by either the Company or Verizon.

As of May 2003, as reported by PLM, approximately 11,438 doubled poles exist in the Company’s system.<sup>2</sup> Of these 11,438 doubled poles, 542 are ready for removal by the Company and 2,424 are ready for the Company to transfer its facilities. These numbers represent an increase of approximately seventeen percent in the number of doubled poles (1,658 poles) in the Company’s service territory and a thirteen percent increase in the number of poles (340 poles) awaiting action by the Company, as compared to the February numbers reported in the Company’s March 2003 Report. The four-month period from February to May is the start of the active summer construction season when more pole sets occur. During this period, approximately 2,200 doubled poles were set and approximately 500 doubled poles were removed. The Company is working to address the doubled pole issue and will continue to



provide the Department with updates on the PLM application and the anticipated reduction in doubled poles in its next quarterly report.

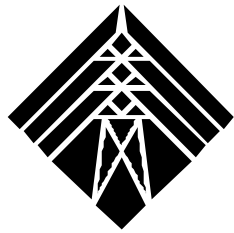
### **III. Conclusion**

The Company will continue to update and provide progress reports required by the Department, as set forth in the Department's March 22<sup>nd</sup> Order.

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<sup>2</sup> These numbers are subject to confirmation with Verizon.

EXHIBIT A



**National Grid**

***NEW ENGLAND***

***VEGETATION MANAGEMENT  
DISTRIBUTION LINE  
MAINTENANCE  
T & M  
PROGRAM MANUAL***

***March 27, 2003***

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# ***GLOSSARY***

**Adventitious buds-** Dormant buds located in a leader.

**Annual growth-** A yearly incremental stage of vegetation growing that can be visually determined by the annual nodes.

**Arborist/Forester-** Here after referred to as “Arborist”. A National Grid USA employee whose role within their respective administrative district is to plan, budget, execute, and audit vegetation management projects; resolve customer issues; work closely with district vendor leadership to achieve performance goals & assist the administrative district with municipality relations/issues. Additionally, to participate in managing storm restoration; implement program policies/programs & provide regular status updates.

**Brush-** Vegetation less than four inches DBH that may reach the overhead facilities at maturity.

**Clearance-** The distance between vegetation and the overhead facilities.

**Company-** This represents the National Grid USA Retail Distribution companies.

**Construction type-** The configuration and design of the lineal overhead facilities.

**DBH-** The diameter of vegetation measured at a point four and one half feet above ground level.

**Dominant-** Exerting ecological or genetic superiority.

**Dormant-** Not actively growing but protected from the environment.

**Flat cutting-** The practice of cutting vegetation at ground level under or adjacent to overhead facilities, where the vegetation has the potential to interface with the overhead facilities.

**Hazard-** Vegetation which appears to: be dead or dying, be structurally weak, have loss of bark, have loss of foliage, and have stress breaks.

**Lateral branch-** A branch extending from a parent branch or stem.

**Line clearance-** The practice of removing vegetation from around overhead facilities.

**Main leader-** A dominant upright stem, usually the main trunk.

**Multiple leaders -** Many stems of vegetation originating from the same root system.

**Node-** A point on a stem at which a leaf or leaves are attached.

**Overhead facilities-** All electrical conductors and equipment that are attached to a utility pole and are used for the conveyance of electricity.

**Permission-** The act of receiving approval from the appropriate property owner, where the vegetation is located, in order to perform necessary preventative maintenance on the vegetation.

**Plant-** Relative to distribution vegetation management purposes, the definition is a tree, vine, or shrub.

**Preventative maintenance-**The pruning, trimming, removal or chemical treatment of vegetation, growing or existing in proximity to overhead facilities, for the purpose of preventing such growth from interfering with the overhead facilities.

**Pruning-** The removal, in a scientific manner, of dead, dying, diseased, interfering, objectionable, and/or weak vegetation branches.

**Scaffold branch-**A large limb that is, or will be part of the permanent branch structure of a tree.

**Shrub-** A low usually multi-stemmed woody plant.

**Sucker growth-** New growth originating from adventitious buds. Usually induced by removing a branch.

**Tree-** A woody perennial plant having a single usually elongate main stem.

**Trim-** See “Pruning”

**Trim cycle-** A predetermined period of time between preventative maintenance activities.

**Trim zone-** The area in and around overhead facilities where vegetation is removed.

**Vegetation-** Plant life such as trees, shrubs, vines, and brush that has a potential to interface with overhead facilities.

**Vendor-** A Vegetation Management service provider who has a Purchase Order to provide such services to the National Grid USA companies, Districts, and Arborists.

**Vine-** A plant whose stem requires support and which climbs by tendrils or twining.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

***DISTRIBUTION LINE***

***VEGETATION MANAGEMENT  
REQUIREMENTS***

***March 27, 2003***

## ***PURPOSE***

To define a set of Distribution Line Vegetation Management Requirements that is implemented by the Company on a uniform basis. These requirements are to lay out the specifications for routine preventative maintenance and removal of; dead, unsound, and structurally weak branches and leaders. The Company's Distribution Line Vegetation Management Requirements are designed to address reliability and safety through the understanding of the dynamic interaction between vegetation and overhead facilities.

## ***TRIM CYCLE***

The recommended trim cycle is a five-year cycle with a three-year interim trim. The trim cycle is implemented on an annual basis, by identifying the feeders that are due to be trimmed and prioritizing them on a reliability performance basis. The interim trim is implemented by identifying which feeders are halfway through the cycle. They are surveyed for growth and hazard situations and then prioritized for interim trimming. Customer Service lines are only trimmed on the trim cycle basis unless the Arborists determines that a special condition exists requiring an interim trim.

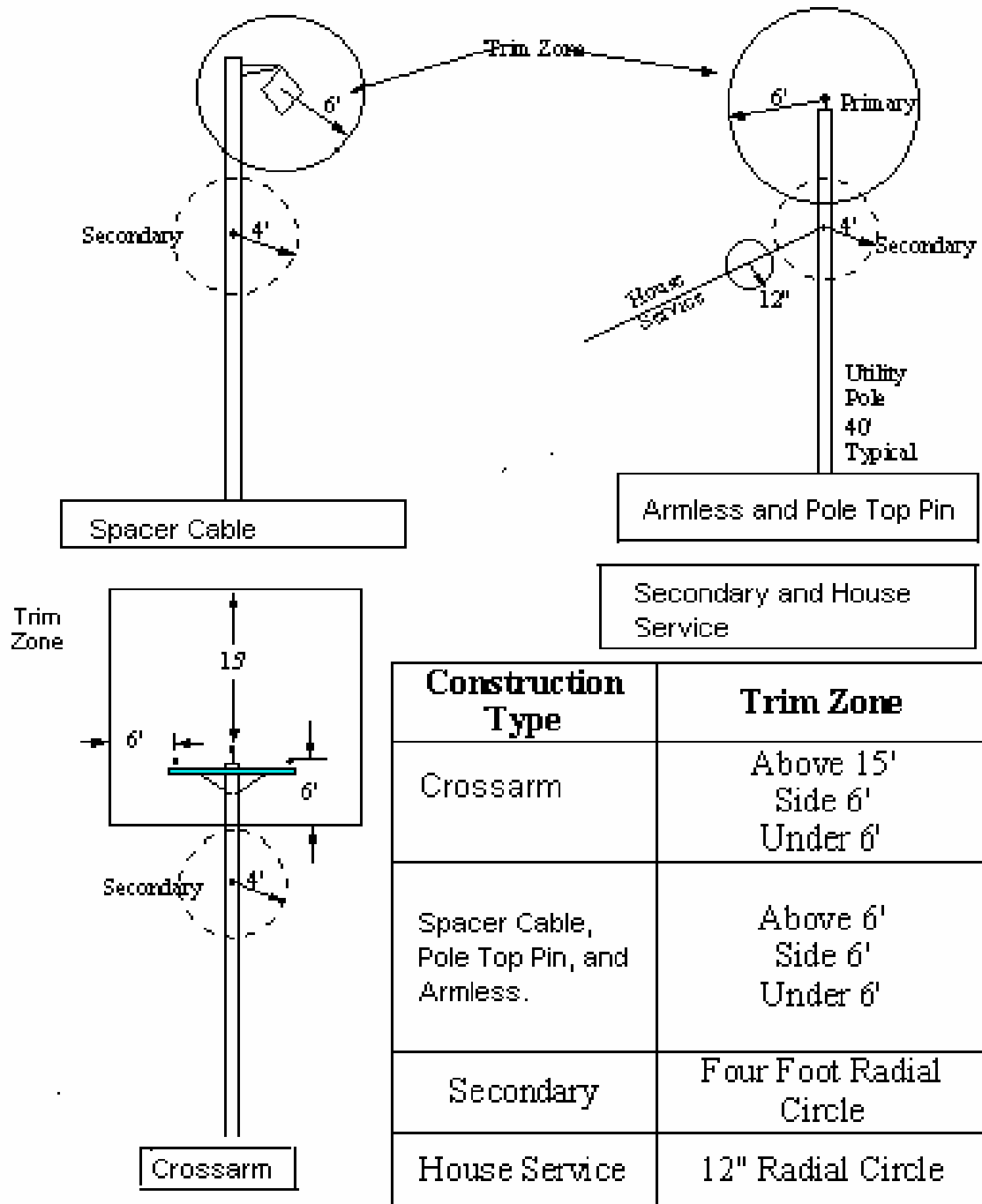
## ***TREE TRIMMING ZONE SPECIFICATION REQUIREMENTS***

Table A below illustrates the clearance distance required by the Company for all distribution line clearance maintenance activities based on Overhead facilities construction types. As with all programs there are exceptions to the rules and additional special conditions requirements. These are all clearly spelled out in the following sub-sections. These specifications are designed to prevent vegetation capable of interfering with the overhead facilities, from encroaching upon them, within a four-year period.

**TABLE A**

<b>CONSTRUCTION TYPE</b>	<b>TRIM ZONE</b>
ALL CROSS ARM CONSTRUCTION	ABOVE 15'  SIDE 6'  UNDER 6'
ALL SPACER CABLE, POLE TOP PIN, AND ARMLESS CONSTRUCTION	ABOVE 6'  SIDE 6'  UNDER 6'
TRIPLEX AND RACKED SECONDARY	FOUR FOOT RADIAL CIRCLE
HOUSE SERVICE	12" RADIAL CIRCLE

# Vegetation Management Distribution Line Maintenance Minimum Requirements





## ***HAZARD REMOVALS WITHIN TRIM ZONE***

Remove all hazardous branches from above or adjacent to the overhead facilities to protect the facilities until the next trim cycle.

## ***SELECTIVE FLAT-CUTTING WITHIN THE TRIM ZONE***

Targeted for flat cutting will be tree species that are under the electric conductor(s) and are over 8' in height.

## ***TRIM ZONE EXCEPTIONS***

### **Clearances restricting trim zone requirements**

**Permissions restrictions-**In the event that permission from a property owner to trim or remove in accordance with these specifications cannot be obtained, the following steps will be taken:

*LIGHT TRIM-* Computer or form entry with inclusion of town, street address and pole number.

*REFUSAL TO TRIM-* Computer or form entry with inclusion of property owner name, address, telephone number, pole number, description of site, and if possible, signature of property owner.

*REFUSAL FOR HAZARD REMOVAL-* If permission is denied for the removal of a hazardous limb/tree a computer or form entry with inclusion of the property owners name, address, telephone number, pole number, description of defect or hazard and if possible, property owners' signature. These serious hazards warrant a photo of the tree and follow up by the Arborist.

\*Above information will be provided back to the Arborist on a regular basis, as identified.

**Structural restrictions-** In the event that the main leader and/or scaffolding branches fall within the trim zone are determined not to interfere with the overhead facilities; structurally sound and; free of sucker growth within the trim zone, then the main leader and/or branch may remain in the trim zone.

## ***TYPES, METHODS, AND TECHNIQUES***

### **Acceptable Tree Trimming Types**

There are three basic types of trimming that will be discussed in this section. They include; Crown Reduction (Top trimming), Side trimming, and Overhang trimming. There are two additional trimming terms used when discussing trimming types and they are under trimming and V or Through trimming. They will not be listed as separate types because they usually involve one or more of the types already listed. The type of trimming that is selected to be used should be based upon the tree to overhead facility relationship, factoring in the type of tree being trimmed and its growth habits. The ultimate goal is to achieve the necessary clearance to provide a continuous supply of reliable electrical service free of interference from trees while maintaining, as close as possible, the natural characteristics of the tree being trimmed.

**Crown Reduction** - This type of trimming is also called "Top trimming". It is best when used on slow growing trees. The trimming methods employed to accomplish this affect include drop crotching and/or directional trimming. The trimming type reduces the top of the trees crown when the tree is directly located underneath the overhead facilities and is intended to give the tree a natural look. The trimming should be done with as few cuts as possible and the branches should cut back to a leader, which will minimize the potential for sucker growth.

**Side Trimming** - Trees growing adjacent to, into, and towards overhead facilities should be side trimmed by removing the entire branch back to the main leader or at least free of the trim zone. Trees with branches that produce sucker growth when cut should definitely be removed. Care should be taken to reduce the effect of unsightly notches by shaping adjacent branches.

**Overhang Trimming** - This is where the overhead facilities pass under a portion of the crown and the lower branches are removed to provide trim zone overhead clearance. If it is not possible to totally remove overhangs, then every attempt should be made to reduce the weight of the overhang by trimming the branches. All dead, damaged, or weakened overhang branches must be removed.

### **Acceptable Tree Trimming Methods**

There are two basic methods employed in utility line clearance trimming, "Drop Crotching" and "Directional Trimming". These are the two methods that will be accepted by the arborists. On occasion a vendor may be requested to apply an alternative method to fulfill a special set of needs or criteria. Although not considered a trimming method, trees that are approximately 15 feet in height should be trimmed at the nodes. Alex Shigo calls this "First Order Pruning". The branches that should be retained are those that will produce future growth directionally away from the overhead facilities.

**Drop Crotching** - This method of trimming calls for removing some of the larger branches at variable distances below the top of the crown. It is intended to retain as much

of the natural characteristics of the tree as possible while thinning the crown of the tree. This method of trimming should eliminate future sucker growth, when proper nodal pruning cuts are made, and reduces the amount of trimming work required in subsequent trimming operations.

**Directional Trimming** - The intent of this method is to direct future growth away from the overhead facilities. It is accomplished by cutting the growth to a lateral branch, which will redirect its future growth away from the overhead facilities.

In Dr. Alex L. Shigo's publication, "Pruning Trees Near Electric Utility Lines" he indicates that 90% of the time 3 branches can be removed to provide 90% of the clearance, which is his 90-3-90 concept. When utilizing these two methods to accomplish a trimming type, this concept should be considered as an employable technique. The use of the two methods will provide the maximum amount of clearance necessary to assure proper clearance from the overhead facilities while minimizing the amount of tree deformation occurring.

### **Acceptable Pruning Techniques**

Pruning techniques and practices are fully explained and diagramed in ANSI A-300, and another excellent reference is Dr. Alex L. Shigo's publication "Pruning Trees Near Electric Utility Lines". Given the fact that these publications provide as excellent guides for this subject area, we feel that there is no need for further explanation.

### ***HAZARD MITIGATION***

All vegetation hazards which take one hour or more to remove should not be looked at as a preventative maintenance function but as a hazard mitigation function and should be managed as such. The hazard removal should be identified by the nearest pole location and should be scheduled for removal by a hazard mitigation crew, unless the hazard poses an immediate outage or safety situation. In the event of an immediate outage or safety situation the vendor should immediately notify the Arborist for a determination of removal by the vendor.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

**VEGETATION MANAGEMENT  
VENDOR**

***REQUIREMENTS***

***FOR***

***T & M CREWS***

***March 27, 2003***

## ***PURPOSE***

To define the role and expectations of the Company's vendors in relation to vegetation management activities performed by the Vendor's T & M crews for the Company. The role and expectations will include such items as; personnel, equipment, customer relations, government relations, Arborist relations, storm emergency implementation procedures, time management, workload implementation plans, wood waste management, and other related items.

## ***VENDOR REQUIREMENTS***

### ***PERSONNEL***

The vendor shall determine and provide the appropriate level of supervision required to maintain high quality workmanship and optimum productivity in a cost effective manner and in accordance with the supervisory requirements defined in this Chapter.

The vendor is to provide the appropriately trained and certified labor force required to maintain high quality workmanship and optimum productivity while implementing the vegetation management requirements and vendor requirements.

All services are billable in accordance with the vendor submitted labor and equipment rate sheets. Any services required by the Arborist, which are not on the vendor submitted rate sheets, will require prior approval from the System Arborist and Supply Chain.

### ***TRAINING***

The vendor shall provide a minimum of eight hours of annual safety training and eight hours of annual professional development training per tree crew employee. All training shall be documented and all documentation shall be provided to the Company Arborist. The Company will provide straight labor time only for such training, up to these maximums. All daily tailgate work/safety meetings which are less than 1 hour are not to be counted towards this time. Any other training required by the vendor which is 1 hour or greater will not be billable once the 16 hour threshold has been reached. Where the vendor feels it is applicable, the vendor may mutually agree to combine their training with Arborist required informational sessions. In this event, the time required by the Arborist will be fully billable including equipment.

## ***VEGETATION MANAGEMENT SERVICES***

**Preventative Maintenance-** Those services as described in the “Distribution Line Vegetation Management Requirements” section. All Preventative maintenance will be conducted on reliability prioritized feeder basis.

**Hazard Tree Mitigation-** Those services as described in the “Distribution Line Vegetation Management Requirements” section entitled Hazard Mitigation. The vendor personnel should continuously look for hazardous conditions, assess level of severity, and identify the hazard location by street and pole number. They should immediately report such hazard conditions to their immediate supervisor for reporting to the Arborist. In the event that they cannot reach their immediate supervisor, they should directly notify the Arborist.

**Re-trims -** All work which is determined by the Arborist to be inside the “Distribution Line Vegetation Management Requirements” which does not have documentation as to why the “Distribution Line Vegetation Management Requirements” could not be met will be required to be re-trimmed at the vendors expense. Any work that gains a change in permission status after trimming has occurred will be re-trimmed as a component of the Company’s expense.

## ***CUSTOMER RELATIONS***

Workers shall be properly attired and act in a professional manner. Contact with customers shall be done in a businesslike manner and all requests shall be clear and precise to avoid customer misunderstanding or apprehension. Should there be a serious misunderstanding with a customer, which the vendor cannot fully address or alleviate; the vendor shall notify the Arborist.

## ***UTILITY RELATIONS***

**Annual Vegetation Implementation Plan-** The Arborist will inform the vendor supervisory personnel of the prioritized feeders to be maintained, the targeted mileage goals, and not to exceed cost per mile data. The vendor supervisory personnel will provide the Arborist with a proposed Annual Vegetation Implementation Plan to accomplish the expected goals in a cost effective and productive approach. The Arborist will either accept the Annual Vegetation Implementation Plan or work with the vendor to modify it into an acceptable document to provide for other District concerns the Arborist may have. Once the Arborist has approved the plan it can be implemented. During the course of the year based on data provided by the Arborist, the plan may have to be adjusted to account for data fluctuations.

**Communication-** The vendor shall communicate with the Arborist on a routine basis on such matters including but not limited to: work progress; prior notification in changes to crew complement; lost time; etc. The vendor labor force will contact the Company daily and report; work location and daily location changes, observed overhead facility problems and outages particularly crew caused outages.

**Data Management-** The vendor is responsible for collecting, on company provided electronic data collectors, the required data information requested. In the event that an electronic data collector is not available, then data collection forms will be provided by the company requesting the relevant data information required. The vendor's personnel are responsible for the accuracy of the data that they are reporting and the safe handling of the electronic data collector. If the vendor's personnel breaks the data collector and it is found by the Company to be due to negligence on the vendor's personnel behalf, then the vendor will be charged for the replacement of the electronic data collector.

**ALL DATA INFORMATION COLLECTED ON BEHALF OF A NATIONAL GRID USA COMPANY IS CONFIDENTIAL AND THE SOLE OWNERSHIP OF NATIONAL GRID USA.**

### ***STATE RELATIONS***

The vendor is responsible for notifying the proper state official for all proposed vegetation management activities on state highways. If a permit is required, the company shall obtain the permit. Under specific situations, the Arborist will obtain the necessary permits. Copies of required permits will be kept on site with the crew.

### ***PERMISSIONS***

The Vendor will be responsible for determining and implementing the most cost effective approach, for the company, in obtaining permission.

**Private property-** The Vendor must obtain permission from all private property owners prior to working on private property, except where noted by the Arborist. The vendor will provide the customer, if not at home, with a Company Vegetation Management Program door knocker brochure and a vendor permission card. The vendor shall make a minimum of three documented and reasonable attempts at gaining permission from private property owners. All subsequent skips should be reported to the Arborist for follow up. The vendors crews will not trim or remove vegetation if contact with private property owners cannot be made or if the private property owner refuses to grant permission.

**Municipal property** - The vendor shall obtain permission to do tree work on municipal trees from the proper authority before doing the work. The vendor shall notify the proper municipal official (e.g. Tree Warden, etc.) and let them know where the vendor crews will be working. If a municipal official refuses clearances as specified in the “Distribution Vegetation Management Requirements” the vendor should document the restriction and inform the Arborist.

**Permissions restrictions** - In the event that permission from a property owner to trim and remove trees in accordance with these specifications can not be obtained, the following steps will be taken:

**Light trim-** Computer or paper form entry with inclusion of town, street address and/ or pole number.

**Refusal to trim-** Computer or paper form entry with inclusion of property owner name, address, telephone number, pole number, description of condition and possible signature.

**Refusal for hazard removal-** If permission is denied for removal of a hazardous limb or tree, a computer or form entry with inclusion of the property owner’s name, address, telephone number, pole number, description of condition and possible signature. These serious hazard conditions warrant immediate follow up, including a photo of the tree by the vendor supervisor or the Arborist.

All information above will be reported back to the Arborist on a regular basis, or at most, quarterly.

## ***EQUIPMENT***

The vendor will provide equipment necessary for the performance of the requested services in accordance with the Distribution Line Vegetation Management Requirements and the Purchase Order. This equipment shall be properly maintained, in good operating and presentable condition. The equipment must meet all applicable DOT, ANSI and OSHA Regulations/Standards.

Each Company Arborist will require a minimum number of truck mounted aerial lifts with the lift to be a minimum of fifty-foot platform height. Truck mounted aerial lifts with a platform height greater than 50' will, when required by the Arborist, be billed according to the labor and equipment rate sheet. Any equipment required by the Arborist, which are not on the vendor submitted rate sheets, will require prior approval from the System Arborist and Supply Chain.

The vendor shall be responsible for supplying, at a minimum, a properly operating pager to all supervisory personnel who respond to requests by the Arborist. This is imperative for both normal business and emergency response.



## ***WORK SITE CLEAN-UP***

The vendor is responsible for all work sites to be properly cleaned of vegetation debris, including the legal and environmentally acceptable disposal of leaves, branches, wood, wood chips or slash in accordance with federal, state, and municipal regulations and guidelines.

In the Districts where wood chip disposal/work platform areas are provided, the woodchips must be free and clear of all trash and other undesirable debris that could reduce the resale of the woodchips. Attention to chipper maintenance for the consistent production of high quality woodchips is imperative.

## ***HOURS OF OPERATION***

**Normal work schedule** - 7:30 a.m.- 4:00 p.m. Adjustable based on agreement between the Arborist and Vendor. This is based on a 40-hour workweek and daily includes a 15 minute morning coffee break and a 30 minute lunch break. Also, up to 15 minutes each morning will be available to conduct D.O.T. record keeping and vehicle safety checks.

**Travel and Chip Disposal Time-** The hours of operation are to include travel to and from the work site, fuel time, and wood chip disposal. Until such time that the Arborist provides a convenient parking and chip disposal area, the vendor is responsible for assuring that travel and disposal time is at a minimum.

**Excess Travel-**In the event the Arborist needs to reassign crew(s) to a temporary work area, the Arborist may authorize additional travel time.

**Additional Time-** Time Not Worked due to; weather, equipment breakdown time and, Company scheduled holiday may be rescheduled and/or authorized by the Arborist.

## ***STORM EMERGENCY RESPONSE***

**Vendor storm standby** -During severe inclement weather, crew(s) may be placed on storm standby by the Arborist or their designee. They will be instructed as to which Company staging area to report to until such time needed for actual storm restoration work. Tree Crew standby time should be kept to a minimum by utilizing the crews, whenever possible, to conduct preventative maintenance activities while waiting to be deployed to a weather related event. This would be primarily during daylight hours when crews are being held at the end of the day due to the threat of an incoming storm. The employee and equipment billable rates will take effect as soon as they are requested by the Company Arborist to be on standby status.

**Arborist vendor storm response** - During off-hour call out for storm or emergency work, the vendor will be allowed no more than 60 minutes to be at the work location from the time that the Arborist makes contact with the first vendor contact person.

**Additional vendor storm response** - The vendor will provide additional crews as requested by the System Arborist or their designee to the extent possible. The Lump Sum crews will be allocated to all Divisions and their Districts on a retail company basis and based on need, at the discretion of the New England System Arborist.

### **Storm Equipped Aerial Lift Trucks**

All equipment required for storm response purposes shall be in a safe and reliable operating condition.

The following is required equipment during storm conditions:

Truck mounted aerial lift and lift to be a minimum of forty five foot platform height, and all necessary tools, equipment and clothing for storm restoration work including night lighting. Chippers are not required storm equipment unless requested by the Arborist.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

***VEGETATION MANAGEMENT  
INCENTIVE PROGRAM***

***FOR  
VENDOR  
T & M CREWS***

***March 27, 2003***

## ***DESCRIPTION AND GUIDELINES VENDOR TREE CREWS***

### ***GOAL***

To improve reliability, attain customer satisfaction, and accomplish more miles of trimming per year in a safe, efficient, and cost effective manner. Also, to assist the vendors in developing a more stable workforce.

### ***MEASURABLE DRIVERS***

**Miles Trimmed-** A predetermined mileage requirement is set by budget divided by avg. cost per mile. The bonus award is established, based on preset thresholds achieved over the requirement, up to a maximum of a 20% enhancement.

**Customer Complaints-** This is a complaint that requires remediation equal to or greater than \$ 250.00 in costs and the crew was determined to be negligent by the National Grid companies Arborist. If the crew is required, by the National Grid companies Arborist, to re-trim a span or more due to poor performance by the crew then, this constitutes a complaint.

**Crew Caused Outages-** Any outage that was directly derived by an action of the vendor companies employee and was not a planned outage.

**Avoidable Lost Time Accidents-** This is an accident that could have been avoided by following the appropriate vendor company and/or OSHA safety practices and procedures.

### ***QUARTERLY VENDOR CREW BASE AWARDS MEASURES***

Quarterly each vendor crew employee directly involved in the National Grid companies District level distribution line maintenance incentive program will have the opportunity to achieve the maximum quarterly award of \$400.00. This award is prorated based on the % over miles trimmed requirement attained and reduced based on the individual criteria.

### ***QUARTERLY AWARD DISTRICT CRITERIA***

**TRIMMED MILES ACCOMPLISHED-** If District miles trimmed productivity exceeds the projected quarterly weighted annual requirement by 20% or more they attain the full \$ 400.00 quarterly award. Between the projected requirement and the 20% enhanced productivity they can attain \$ 50.00 at 7.5% and an additional \$ 50.00 for each 2.5% improvement up to 15.0% and an additional \$ 75.00 to 17.5% and 125.00 at 20.0% for the full \$ 400.00.

***INDIVIDUAL CRITERIA*** (All deductions are tallied, totaled and deducted from the award.)

**EMPLOYMENT STATUS-** The employee must have been employed by the vendor and working in the evaluated National Grid Company District for the full evaluated quarter.

**CUSTOMER COMPLAINTS-** The first complaint will reduce the award by 30%, the second complaint by 60% and the third complaint by 100%.

**CREW CAUSED OUTAGE-** 1 outage in a quarter will reduce the award by 50%. Greater than one will disqualify the employee from the award.

**AVOIDABLE LOST TIME ACCIDENT-** No lost time accidents in a quarter are acceptable. 1 Lost time accident will disqualify the employee from the award.

***CREW ANNUAL RECOGNITION AWARD***

Annually each vendor crew employee directly involved in the National Grid companies District level distribution line maintenance incentive program will have the opportunity to achieve the maximum annual award. This award is prorated based on the following criteria.

***ANNUAL AWARD DISTRICT CRITERIA***

**TRIMMED MILES ACCOMPLISHED-** If National Grid USA trimmed Miles productivity exceeds the projected annual requirement by 20% or more, the vendor employee attains the full \$1,000.00 annual award. Between the projected requirement and the 20% enhanced productivity they can attain \$ 100.00 at 7.5% and an additional prorated amount for each 2.5% improvement up to the full \$ 1,000.00.

***INDIVIDUAL CRITERIA*** (All deductions are tallied, totaled and deducted from the award.)

**EMPLOYMENT STATUS -** The employee must have been employed by the vendor and working in the evaluated National Grid USA Company service area for a minimum of a full quarter and their award will be prorated based on quarters worked.

**CUSTOMER COMPLAINTS-** Each individual complaint will reduce the award by 25%. Four or more complaints will disqualify the employee from the annual award.

**CREW CAUSED OUTAGE-** 1 outage in a year will reduce the award by 50%. Greater than one event will disqualify the employee from the annual award.

**AVOIDABLE LOST TIME ACCIDENT-** No lost time accidents in a quarter are acceptable. One event will disqualify the employee from the annual award.

All awards paid out will include, all related statutory overhead costs.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

***ARBORIST REQUIREMENTS***

***March 27, 2003***

## ***PURPOSE***

To define the role of the Company Arborist within the Vegetation Management Program.

This description is to include the relationship between the Arborist Requirement, the Vendor Requirements, and Vegetation Management Requirements. The interrelationship is designed to insure high cost effective productivity without jeopardizing work quality and reliability. These requirements identify seven major areas.

## ***PLAN, BUDGET, & ADMINISTRATION***

**Plan-** The Arborist is responsible for developing long and short term plans for their respective management area. This is done by analyzing the vegetation management program data and conducting field survey validations to prioritize preventative maintenance activities and hazard tree removals on a feeder basis. They are also responsible for the workload planning of retail company R.O.W. maintenance activities, within the same management area.

**Budget-** In concert with the long and short term plans the Arborist is responsible for developing plan related budgets to show what financial resources will be required to carry out the identified plans. Annually, the Arborist will prepare a workload budget and plan of work required to meet the objectives of the long range plan. Once budgets are established and if they differ from the annual budget and workload plan, then it is the Arborists responsibility to reconcile the annual budget and plan to conform with the new budgeted dollars.

**Administration-** The Arborist is ultimately responsible for overall program administration, which includes; the implementation of the long, short, and annual term plans within the approved budgets, management of all collected data, and attainment of annual goals and objectives. They are also responsible for working with the vendor in the development and approval of the Annual Vegetation Implementation Plan which is how the annual plan and goals are achieved.

## ***AUDIT AND EVALUATION OF INTERNAL AND EXTERNAL PROGRAM PERFORMANCE***

**Internal-** The Arborist is responsible for electronic data and records management and maintenance, fiscal accountability, environmental laws and regulatory adherence, following Company policy, procedures, and regulations and complying with Company fiscal and regulatory internal audit standards.

**External-** Through the implementation of quality control practices, the Arborist is responsible for assuring that the vendor meets or exceeds Company standards and expectations. This is done by auditing vendor; performance, work practices, safety procedures and guidelines, equipment condition, and impact on reliability. The Arborist will monitor vendor; cost effectiveness, trimmed miles accomplished, data management recording accuracy, customer satisfaction, appearance, and communication skills.

### ***EMERGENCY RESTORATION***

The Arborist is responsible for knowing, understanding, and implementing the Company's storm and emergency restoration policies and procedures. They should be prepared to implement these policies and procedures within their respective management area when necessary. All vendor personnel working within the Arborists management area, will be fully informed and aware of what is expected of them during a storm or emergency restoration situation, by the Arborist.

### ***INTERDEPARTMENTAL COORDINATION***

Periodically the situation arises where the services of one or more departments, within the Company, may be needed to implement and /or complete a project. It is the Arborists responsibility to know all internal parties within their management areas that may be needed and to coordinate the engagement of their services to implement and/or complete the task that the Arborists program needs implemented and/or completed.

### ***EXTERNAL PUBLIC RELATIONS AND EDUCATION***

It is important that the Arborist interacts with the vendor and the customer to assure that the customer understands the necessity, care, and professionalism of the services being provided to them, in order to obtain difficult or limited permission to provide the vegetation management program services. In the event that the vendor cannot get permission or gets limited permission from the property owner, the Arborist will take the documented information from the vendor and attempt to obtain the permission themselves. Regardless of the results, the Arborist should keep the documented event on file for future evidence. Whenever possible the Arborist should attempt to get a photo of the tree(s) in question.

This position will periodically have to make presentations about the importance and quality of service of the program to; neighborhood groups, civic groups, elected officials, government regulators, vendors, and other interested parties. These presentations can encompass; scientific technical, programmatic, legal, and procedural information.



### ***PROFESSIONAL DEVELOPMENT***

The Arborist is responsible for its own continued professional development through; membership in affiliated professional organizations, career development, professional development, data management, electronic processing, office automation, and other associated seminars/courses.

### ***TECHNICAL ADVISOR***

Periodically, the Arborist is required to provide professional technical and scientific advise to other Company departments. On occasion the Arborist, may be required by the Company's legal department, to provide professional services as an expert witness.